

AMENDED CLAIM SET

The claims have been amended as set forth in the following listing of the claims:

1. (currently amended) An inflator, comprising:

a cylindrical inflator housing which is closed at one end thereof and having an opening at the other end, and in which a pressurized gas is charged;

a diffuser portion connected to the opening of the inflator housing, and having a gas discharge port therein;

a rupturable plate that closes at least one portion of a gas discharge passage, the gas discharge passage extending from the inflator housing to the gas discharge port of the diffuser portion;

an igniter including an igniting portion covered by a cup and provided within the diffuser portion a diffuser such that an axial direction of the inflator housing is orthogonal to an axial direction of the igniter, the igniter generating a combustion product upon activation thereof; and

a fragile portion provided in a peripheral surface of the cup and opposing the rupturable plate, such that the combustion product is directed towards a single direction.

2. (previously presented) An inflator according to claim 1, wherein said fragile portion is ruptured upon an activation of the igniter and a rupturing energy acts on the rupturable plate from the fragile portion.

3. (previously presented) An inflator according to claim 1, wherein the fragile portion provided in the igniter is constituted with a combination of a hole provided in the cup

covering the igniting portion of the igniter and a sealing tape closing the hole from the inside of the cup.

4. (previously presented) An inflator according to claim 1, wherein the fragile portion provided in the igniter comprises a portion surrounded by a groove or a portion with a notch, which is provided in a side face of the cup covering the igniting portion of the igniter.

5. (currently amended) An inflator, comprising:  
a cylindrical inflator housing which is closed at one end thereof and having an opening at the other end, and in which a pressurized gas is charged;

a diffuser portion connected to the opening of the inflator housing, and having a gas discharge port therein;

a rupturable plate that closes at least one portion of a gas discharge passage, the gas discharge passage extending from the inflator housing to the gas discharge port of the diffuser portion;

an igniter, provided spaced apart from the rupturable plate prior to an activation of the igniter, for rupturing the rupturable plate disposed in the diffuser portion such that an axial direction of the inflator housing is orthogonal to an axial direction of the igniter ~~and an igniting portion of the igniter being located outside of the rupturing plate in a radial direction of the rupturing plate~~; and

means for directing a rupturing energy, generated by activation of the igniter, in a direction that exactly opposes the rupturable plate to rupture the rupturable plate,

wherein said means is a guiding passage, disposed inside the diffuser portion, for guiding the rupturing energy discharged from the igniter to the rupturable plate formed in the diffuser portion, and the rupturing energy is guided to a central portion of the rupturable plate or a portion thereof in the vicinity of the central portion by action of the guiding passage.

6. (currently amended) An inflator according to claim 5, wherein the guiding passage is defined by a cap, which surrounds at least an igniting portion the igniting portion of the igniter and disposed in a direction orthogonal to the axial direction of the inflator housing, and provided with a hole that a hole which is provided at a position, on a side face of the cap, which exactly opposes the rupturable plate.

7. (canceled)

8. (canceled)

9. (previously presented) An inflator according to claim 1, wherein the pressurized gas is charged in a single space defined by the cylindrical inflator housing and the diffuser portion.

10. (previously presented) An inflator, comprising:  
a cylindrical inflator housing which is closed at one end thereof and having an opening portion at the other end and in which a pressurized gas is charged;  
a diffuser portion which is connected to the opening portion of the inflator housing, and having a gas discharge port;

a gas discharge passage extending from the inflator housing to the gas discharge port of the diffuser portion, at least one portion of the gas discharge passage being closed by a rupturable plate;

an igniter, for rupturing the rupturable plate, disposed in the diffuser portion, such that the axial direction of the inflator housing and the axial direction of the igniter obliquely cross with each other, the igniter generating a rupturing energy acting in a direction oblique to the rupturable plate to rupture the rupturable plate; and

an igniter supporting portion provided in the diffuser and making a direct contact with and fixing the igniter in the diffuser portion, the igniter supporting portion reducing a cross section of the gas discharge passage, such that the igniter supporting portion projects inwardly into the gas discharge passage more than an inner surface of the diffuser portion.

11. (previously presented) An inflator according to claim 1 or 10, further comprising:

a diffuser tube, having a second gas discharge port, connected to the gas discharge port of the diffuser portion.

12. (previously presented) An inflator according to claim 11, wherein the diffuser tube is arranged, such that a center axis of the diffuser tube and a center axis of the inflator housing coincide or are parallel to each other.

13. (previously presented) An inflator according to claim 11, wherein the diffuser tube has a plurality of second gas discharge ports in a peripheral face thereof, and the plurality of second gas discharge ports are provided circumferentially at equal intervals.

14. (previously presented) An inflator according to claim 13, further comprising:

a filter, which catches fragments of the rupturable plate, being disposed in the diffuser tube.

15. (previously presented) An inflator according to claim 12, wherein the diffuser tube has a plurality of second gas discharge ports in a peripheral face thereof and the plural second gas discharge ports are provided circumferentially at equal intervals.

16. (previously presented) An inflator, comprising:

a cylindrical inflator housing provided with an opening portion at one end thereof and a closed portion at the other end thereof, and including a pressurized gas therein;

a diffuser portion connected to the opening portion and having a gas discharge port, the diffuser portion including therein a gas passage extending from the inflator housing to the gas discharge port;

a rupturable plate that closes at least a portion of the gas passage;

an igniter provided within the diffuser portion such that an axis of the igniter is perpendicular to an axis of the cylindrical inflator housing, the igniter generating a combustion product upon activation thereof; and

a deforming member provided between the igniter and the rupturable plate, such that the deforming member is prevented from making a direct contact with the rupturable plate prior to activation of the inflator, and is deformed by the combustion product to cause the rupturable plate to rupture by a deformation thereof.

17. (previously presented) The inflator according to claim 16, wherein the deforming member is formed in a single piece and attached to the diffuser portion before activation of the inflator.

18. (previously presented) The inflator according to claim 17, wherein the deforming member is a circumferential portion of a cap that surrounds at least an igniting portion of the igniter and is disposed in a direction perpendicular to the axis of the cylindrical inflator housing.

19. (previously presented) The inflator according to claim 16, wherein the deforming member includes a weakened portion that deforms upon receiving the combustion product.